Complete Summary

GUIDELINE TITLE

Guidelines for the assessment and management of chronic pain.

BIBLIOGRAPHIC SOURCE(S)

Guidelines for the assessment and management of chronic pain. WMJ 2004;103(3):13-42. [28 references] PubMed

GUIDELINE STATUS

This is the current release of the guideline.

* * REGULATORY ALERT * *

FDA WARNING/REGULATORY ALERT

Note from the National Guideline Clearinghouse: This guideline references a drug(s) for which important revised regulatory information has been released.

On September 30, 2004, Vioxx (rofecoxib) was withdrawn from the U.S. and worldwide market due to safety concerns of an increased risk of cardiovascular events. See the U.S. Food and Drug Administration (FDA) Web site for more information.

Subsequently, on April 7, 2005, after concluding that the overall risk versus benefit profile is unfavorable, the FDA requested that Pfizer, Inc voluntarily withdraw Bextra (valdecoxib) from the market. The FDA also asked manufacturers of all marketed prescription nonsteroidal anti-inflammatory drugs (NSAIDs), including Celebrex (celecoxib), a COX-2 selective NSAID, to revise the labeling (package insert) for their products to include a boxed warning and a Medication Guide. Finally, FDA asked manufacturers of non-prescription (over the counter [OTC]) NSAIDs to revise their labeling to include more specific information about the potential gastrointestinal (GI) and cardiovascular (CV) risks, and information to assist consumers in the safe use of the drug. See the FDA Web site for more information.

Most recently, on June 15, 2005, the FDA requested that sponsors of all non-steroidal anti-inflammatory drugs (NSAID) make labeling changes to their products. FDA recommended proposed labeling for both the prescription and over-the-counter (OTC) NSAIDs and a medication guide for the entire class of prescription products. All sponsors of marketed prescription NSAIDs, including Celebrex (celecoxib), a COX-2 selective NSAID, have been asked to revise the labeling (package insert) for their products to include a boxed warning, highlighting the potential for increased risk of cardiovascular (CV) events and the

well described, serious, potential life-threatening gastrointestinal (GI) bleeding associated with their use. FDA regulation 21CFR 208 requires a Medication Guide to be provided with each prescription that is dispensed for products that FDA determines pose a serious and significant public health concern. See the FDA Web site for more information.

Additional Notices

- On July 19, 2006, the FDA notified healthcare professionals and consumers of new safety information regarding taking medications used to treat migraine headaches (triptans) together with certain types of antidepressant and mood disorder medications, selective serotonin reuptake inhibitors (SSRIs) and selective serotonin/norepinephrine reuptake inhibitors (SNRIs). A life-threatening condition called serotonin syndrome may occur when triptans are used together with a SSRI or a SNRI. See the FDA Web site for more information.
- On May 12, 2006, GlaxoSmithKline (GSK) and the U.S. Food and Drug Administration (FDA) notified healthcare professionals of changes to the Clinical Worsening and Suicide Risk subsection of the WARNINGS section in the prescribing Information for Paxil and Paxil CR. These labeling changes relate to adult patients, particularly those who are younger adults.

  A recent meta-analysis conducted of suicidal behavior and ideation in placebo-controlled clinical trials of paroxetine in adult patients with psychiatric disorders including Major Depressive Disorder (MDD), other depression and non-depression disorders. Results of this analysis showed a higher frequency of suicidal behavior in young adults treated with paroxetine compared with placebo. Further, in the analysis of adults with MDD (all ages), the frequency of suicidal behavior was higher in patients treated with paroxetine compared with placebo. This difference was statistically significant; however, as the absolute number and incidence of events are small, these data should be interpreted with caution. All of the reported events of suicidal behavior in the adult patients with MDD were non-fatal suicide attempts, and the majority of these attempts (8 of 11) were in younger adults aged 18-30. These MDD data suggest that the higher frequency observed in the younger adult population across psychiatric disorders may extend beyond the age of 24.

  It is important that all patients, especially young adults and those who are improving, receive careful monitoring during paroxetine therapy regardless of the condition being treated. See the FDA Web site for more information.

- On December 8, 2005, the U.S. Food and Drug Administration (FDA) has determined that exposure to paroxetine in the first trimester of pregnancy may increase the risk for congenital malformations, particularly cardiac malformations. At the FDA's request, the manufacturer has changed paroxetine's pregnancy category from C to D and added new data and recommendations to the WARNINGS section of paroxetine's prescribing information. FDA is awaiting the final results of the recent studies and accruing additional data related to the use of paroxetine in pregnancy in order to better characterize the risk for congenital malformations associated with paroxetine.

Physicians who are caring for women receiving paroxetine should alert them to the potential risk to the fetus if they plan to become pregnant or are currently in their first trimester of pregnancy. Discontinuing paroxetine therapy should be considered for these patients. Women who are pregnant, or planning a pregnancy, and currently taking paroxetine should consult with their physician about whether to continue taking it. Women should not stop the drug without discussing the best way to do that with their physician. See the FDA Web site for more information.

- On September 27, 2005, GlaxoSmithKline (GSK) and the U.S. Food and Drug Administration (FDA) notified healthcare professionals of changes to the Pregnancy/PRECAUTIONS section of the Prescribing Information for Paxil and Paxil CR Controlled-Release Tablets to describe the results of a GSK retrospective epidemiologic study of major congenital malformations in infants born to women taking antidepressants during the first trimester of pregnancy. This study suggested an increase in the risk of overall major congenital malformations for paroxetine as compared to other antidepressants [OR 2.2; 95% confidence interval, 1.34-3.63]. Healthcare professionals are advised to carefully weigh the potential risks and benefits of using paroxetine therapy in women during pregnancy and to discuss these findings as well as treatment alternatives with their patients. See the FDA Web site for more information.
- On July 8, 2005, Janssen and FDA notified healthcare professionals of changes to the BOXED WARNING/WARNINGS, CONTRAINDICATIONS, PRECAUTIONS, and DOSAGE AND ADMINISTRATION sections of the prescribing information for Duragesic (fentanyl transdermal). These changes include important safety information in the following areas of the labeling: Use Only in Opioid-Tolerant Patients, Misuse, Abuse and Diversion, Hypoventilation (Respiratory Depression), Interactions with CYP3A4 Inhibitors, Damaged or Cut Patches, Accidental Exposure to Fentanyl, Chronic Pulmonary Disease, Head Injuries and Intracranial Pressure, Interactions with Other CNS Depressants, and Interactions with Alcohol and Drugs of Abuse. See the FDA Web site for more information.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Chronic non-cancer pain

Note: Chronic pain is defined as persistent pain, which can be either continuous or recurrent and of sufficient duration and intensity to adversely affect a patient's well being, level of function, and quality of life.

GUIDELINE CATEGORY

Diagnosis
Evaluation
Management
Treatment

CLINICAL SPECIALTY

Anesthesiology
Family Practice
Internal Medicine
Neurology
Orthopedic Surgery
Physical Medicine and Rehabilitation
Psychiatry
Psychology
Rheumatology

INTENDED USERS

Advanced Practice Nurses
Health Care Providers
Nurses
Occupational Therapists
Physical Therapists
Physicians
Psychologists/Non-physician Behavioral Health Clinicians

GUIDELINE OBJECTIVE(S)

To assist primary care physicians in their assessment and management of patients with persistent pain

TARGET POPULATION

Patients with chronic pain

INTERVENTIONS AND PRACTICES CONSIDERED

Diagnosis/Evaluation

1. Obtaining patient/pain history
2. Comprehensive examination (musculoskeletal, neurological, and psychological examinations and assessment of function)
3. Diagnostic testing
    - Radiological studies (plain radiographs, computed tomography [CT], magnetic resonance imaging [MRI], nuclear medicine, others)
    - Electrodiagnostic studies (electromyography, nerve conduction studies, others)
    - Diagnostic nerve blocks
    - Psychological testing
    - Laboratory testing
    - Functional assessment (patient self-report and/or objective evaluation of mobility, self-care, physical performance; patient self-report of vocational, social, familial, sexual function)
4. Identifying medical and psychiatric comorbidities

Management/Treatment

Pharmacotherapy

1. Nonsteroidal anti-inflammatory drugs (NSAIDs)
    - Non-selective cyclooxygenase (COX)-inhibitors
    - COX-2 selective inhibitors
2. Acetaminophen
3. Opioids
4. Antidepressants
    - Tricyclic antidepressants (TCAs)
    - Selective serotonin reuptake inhibitors (SSRIs)
5. Anticonvulsant or antiepileptic drugs (ACDs or AEDs)
    - First-generation agents
    - Second-generation agents
6. Topical agents
    - Capsaicin preparations
    - Lidocaine patches
    - Counter-irritant ointments or liniments
    - Compounded ointments or gels containing NSAIDs, tricyclic antidepressants, or anticonvulsants
7. Other adjuvants
    - Corticosteroids
    - Baclofen
    - Tizanidine
    - Muscle relaxants (with the exception of carisoprodol, which is considered, but not recommended)
    - Triptans
8. Anxiolytics
    - Selective serotonin reuptake inhibitors
    - Benzodiazepines
    - Buspirone
9. Drugs for insomnia
    - Over-the-counter drugs containing sedating antihistamines
    - Sedative antidepressants such as trazodone
    - Benzodiazepines

Psychological Therapies

1. Individual cognitive behavioral psychotherapy
2. Hypnotic analgesia
3. Vocational counseling
4. Group and family cognitive behavioral psychotherapy
5. Biofeedback treatment

Interventional Approaches

1. Diagnostic blocks
2. Therapeutic blocks
3. Neuroaugmentative procedures (implanted nerve stimulators)
4. Intraspinal drug delivery systems (implanted pumps and/or catheters)
5. Neuroablative procedures

Rehabilitation Approaches

1. Employment of skilled active treatment plan to restore function, alleviate pain, and improve pain management skills
2. Motivation of patient to participate
3. Ruling out conditions requiring urgent surgical or medical intervention
4. Multiple concurrent interventions to address all issues. These treatments may include:
    - Physical and occupational therapy
    - Exercise (including postural training and stabilization, stretching, strengthening, home exercise program)
    - Work conditioning/work hardening
    - Ergonomic modifications
    - Sparing use of modalities used in conjunction with active exercise, including thermal, massage, electrical stimulation, traction, Transcutaneous Electrical Nerve Stimulator, myofascial release)
    - Behavioral/psychological therapy
5. Vocational rehabilitation

Surgical Approaches

1. Surgery for spinal disorders with motor loss or neurological deficit
2. Surgery for persistent radicular pain resistant to other treatment approaches

MAJOR OUTCOMES CONSIDERED

- Pain intensity
- Quality of life
- Physical functioning
- Psychosocial functioning
- Sleep
- Return to work
- Medication usage
- Need for pain-related health care services
- Resolution of medical legal claims

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Not stated

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Not stated

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Not stated

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not applicable

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Initial Evaluation of the Patient with Chronic Pain (Assessment and Diagnosis)

Key Principles

- Recognize the multiple dimensions of chronic pain—biological, psychological, behavioral, familial, vocational, social, and medical legal.
- Identify and understand the nature of the patient's problem and, where possible, the cause of the pain.
- Identify and understand comorbid conditions that may affect treatment.
- Identify and understand the patient's expectations and goals.

Because chronic pain affects multiple aspects of living, accurate multidimensional diagnosis is a prerequisite for effective chronic pain management. A comprehensive evaluation should address medical, physical, and psychosocial issues.

The treating physician should have a thorough knowledge of various common chronic pain conditions and appropriate management options. While these topics are outside the scope of the present document, the references and appendices found in the original guideline document provide a starting point for practitioners interested in acquiring this knowledge.

Depression and anxiety are common comorbidities of chronic pain, either preexisting or as complications of the pain itself. These disorders often require consultation with a behavioral health specialist and/or psychiatrist. Addiction is not commonly seen during chronic pain management, but may exist prior to onset of pain or may develop during the course of a painful disorder, and clinicians should assess for its presence prior to the onset of treatment with controlled substances, and assess for signs of addiction during the course of chronic treatment with opioid analgesics or benzodiazepines.

History

The history, when properly obtained, can provide information about both the physical and psychological aspects of pain. It should include:

- Pain history

        - Chronology of the presenting complaint
        - Mechanism of onset
        - Characterization of pain
            - Location of pain; referral/radiation
            - Quality of pain (stabbing, burning, aching, etc.) A pain diagram can be very useful here. This simple tool helps characterize the location and nature of the pain (see Appendix I of the original guideline document)
            - Intensity of pain: a numeric pain rating scale (0 = no pain; 10 = worst pain imaginable) provides a frame of reference
            - Duration of pain
            - Aggravating and relieving factors
            - Additional symptoms—motor, sensory, and autonomic changes
            - Impact of pain on sleep, mood, work, activities of daily living, social function
            - Special needs of elderly patients and those with dementia (see Table 1 of the original guideline document)
    - History of treatment--Previous surgical, pharmacological, physical, psychological, and other treatments and their effectiveness
    - Psychological history--Screen for anxiety and depression, addiction, somatoform disorder, personality disorder, other prior psychiatric diagnoses, coping style, and personality traits
    - Vocational and medical legal issues and related expectations
    - General medical history
    - Patient's ideas about the cause of pain
    - Patient's goals for evaluation and treatment--Preprinted forms can be helpful in acquiring the pain history. Patients may complete the form in advance, which saves time during the interview. An example is included in Appendix I of the original guideline document.

Examination

A comprehensive examination of each patient is recommended, with direct examination of the painful area(s).

Where appropriate, the comprehensive examination may include:

- Musculoskeletal examination
    - Posture
    - Gait
    - Joint examination--symmetry, range of motion, size, ligamentous stability, provocative maneuvers
    - Spinal examination--symmetry, range of motion, focal tenderness, provocative maneuvers
    - Muscular examination--symmetry, tenderness, tender points (for fibromyalgia), trigger points (taut bands or "knots" palpable in muscle)
    - Strength
- Neurological examination
    - Mental status
    - Cranial nerves
    - Sensation--touch, pressure, pinprick, heat, cold, vibration. In neuropathic pain, there may be findings of decreased sensation or of

increased response to painful stimuli (hyperalgesia). Pain from normally nonpainful stimuli is called allodynia.
        - Reflexes--deep tendon, pathological
- Psychological examination
    - Basic screening for depression, anxiety, substance abuse can be conducted during the history interview.
    - For patients with complex pain problems and/or significant prior psychiatric histories, a detailed psychological evaluation, conducted by a psychiatrist or psychologist, is recommended.
    - For pain patients with a history of alcohol or other drug addiction, an evaluation by a certified addiction counselor or an addiction medicine physician is recommended prior to the initiation of chronic opioid analgesic therapy.
- Assessment of function--abilities and deficits.

Diagnostic Testing

These tests serve as an extension of the history and physical examination.

- Radiological studies (plain radiographs, computed tomography [CT], magnetic resonance imaging [MRI], nuclear medicine, others)
- Electrodiagnostic studies (electromyography, nerve conduction studies, others)
- Diagnostic nerve blocks
- Psychological testing
- Laboratory testing
- Functional assessment (patient self-report and/or objective evaluation of mobility, self-care, physical performance; patient self-report of vocational, social, familial, sexual function)

Testing should be performed by appropriately trained personnel. Testing should be ordered selectively and only when the answer to the following questions is "yes":

1. Will testing help formulate the clinical diagnosis?
2. Will testing impact treatment?

Diagnosis

The diagnosis summarizes the above findings into a coherent statement that identifies the type and scope of the problem. As chronic pain affects multiple dimensions of life, the diagnostic impression should comment on all of these. The components of a multidimensional pain diagnosis include:

- Primary diagnoses (International Classification of Diseases Ninth Revision [ICD-9])--what is causing the pain
- Medical comorbidities (listed as diagnoses) when present
- Psychiatric comorbidities (listed as diagnoses) when present; include a multiaxial (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition [DSM-IV]) diagnosis where pertinent
- Impact of pain on function

Developing and Implementing a Pain Management Plan

Key Principles

- Whenever possible, intervene early.
- Identify specific and realistic goals for therapy.
- Define what will be done and the time required to reach each goal.
- Identify the rationale for each treatment and who will be involved.
- Physician and non-physician clinician should agree upon the treatment plan and work toward the same goals.
- Use a combination of therapeutic interventions to obtain the best outcome.
- Document treatments and measure progress against the treatment plan.
- A simple ABCDE mnemonic from the Agency for Health Care Policy and Research illustrates key elements for assessment and management (see table below).

Table: ABCDE Plan for Pain Assessment and Management

- Ask about pain regularly. Assess pain systematically.
- Believe the patient and family in their reports of pain and what relieves it.
- Choose pain control options appropriate for the patient, family, and setting.
- Deliver interventions in a timely, logical, and coordinated fashion.
- Empower patients and their families. Enable them to control their course to the greatest extent possible.

Chronic pain management can be carried out in many different ways and according to many different treatment philosophies. Treatment approaches used as components of a multidisciplinary pain management plan are outlined in subsequent sections of this Guideline.

For many patients, a combination of therapies (e.g., rehabilitation, pharmacotherapy, interventional therapy, behavioral therapy, surgery) is the most successful approach. Generally speaking, earlier treatment is associated with a better outcome.

No matter what treatment approach is used, the same key principles apply. Pain management should have defined goals and time frames for achieving those goals. Develop measurable and realistic goals. Chronic pain management should have the reasonable expectation of decreasing pain when possible, and of improving function for the individual with chronic pain.

The Treatment Plan

Develop a written plan before starting treatment. Share the plan with the patient and all team members, and review and revise periodically as necessary. The plan should:

- Take all dimensions of the diagnostic impression into account
- Clearly define the patient's overall condition
- Define treatment goals and expectations
    - Goals should be "SMART"

        - S - Specific
        - M - Measurable
        - A - Achievable
        - R - Realistic
        - T - Time based
    - Outline specific goals with the patient at the outset:
        - Restore function
        - Reduce pain
        - Improve sleep
        - Improve coping skills
        - Reduce affective distress
        - Return to work
        - Others--specify
    - Determine and address patient's expectations. Are they realistic?
    - Communicate physician's expectations
        - Attendance
        - Adherence to treatment regimen
        - Documentation of progress
        - Understanding of the difference between active treatment (designed to eliminate/alleviate or cure the underlying pain problem or substantially improve function) and maintenance treatment (stable state, palliation/symptom control, only small changes expected). The term maintenance treatment as used here should not be confused with methadone maintenance in narcotic treatment programs.
- Patient and physician together should define:
    - How each goal will be reached and who is responsible
    - Beginning and end point - when should active treatment stop? Ongoing treatments that do not provide demonstrable benefits are not productive for physicians or for patients, and actually could have adverse health and economic consequences. Examples of end points include:
        - Planned outcomes are achieved.
        - Patient reaches stable state.
        - Patient is independent in self-management.
        - Patient is unable to adhere to the program, or treatment is unsuccessful.
        - The physician is unable to help the patient in the current situation, in which case appropriate alternate or specialty treatment is recommended.

Monitor and Document Care

- All individuals involved in a patient's care should document treatment goals, duration, type, and response each time treatment is carried out.
- Set a schedule for periodic reevaluation. If a treatment team is involved, a team conference format is helpful; team members meet to discuss the overall treatment plan and the patient's progress.
- Reevaluation should document the patient's progress toward established goals. Treatment is successful if it results in a decrease in level of symptoms, an increase in level of function, or both. Changes in the treatment plan, rationale for changes, and areas of improved function should be noted.

- There should be regular communication among all treating physicians and other health professionals. This avoids duplication of effort and maintains a consistent structure for treatment.
- Remember, the goal is to establish the patient's ability to self-manage their symptoms.

Outcomes in Chronic Pain Management

Maintain accurate and complete records of pain treatment and its effectiveness. Outcomes may include:

- Pain reduction
- Improved physical function--ability to perform various activities and exercises
- Improved psychosocial function--resumption of family/home roles, activities of daily living, activities outside the home
- Improved sleep
- Reduced depression or anxiety
- Return to work or resumption of full duty work or with restrictions (where applicable)
- Change in medication use--decreased use, or appropriate use of effective medications to improve function
- Increased ability to self-manage residual pain and related problems
- Reduced utilization of pain-related health care services--fewer clinic or emergency visits, fewer phone calls, improved self-reliance
- Resolution of medical legal claims by providing information to assist in "case closure"

Pain outcomes can be difficult to quantify, as many of them are most easily measured in terms of qualitative statements (e.g. "I feel better.")

- Pain intensity can be assessed with a numeric scale (0-10) or other validated, reliable rating scale(s).
- Functional improvement is more difficult to quantify, but can be measured. Whenever possible, pain treatment outcomes should be assessed on the basis of objective measures of function (e.g., physical capacity ratings [lifting, bending, carrying, walking speed]).

Referral to Specialized Pain Centers

When a physician is unable to provide effective pain management for a particular patient, referral to a specialty pain center may be appropriate. Reasons for referral include:

- Diagnostic assistance
- Advice on suitability of present treatment
- Treatment planning for initial and long-term pain management
- Comprehensive management: Pain center manages patient until stable; pain care is then returned to the referring physician
- Advice on optimal pharmacotherapy

Patients referred to specialty pain centers should undergo a comprehensive evaluation by a physician and a psychologist with training and experience in pain management. These evaluations may include a multiaxial psychiatric diagnosis.

Guiding Principles of Treatment

Pharmacotherapy

Medications are critical elements of a comprehensive pain treatment plan. They are often used in conjunction with other interventional, surgical, psychological, and rehabilitation treatment modalities. Pharmacotherapy for the pain patient may be specifically directed at pain or at depression, anxiety, or other comorbid conditions. Effective treatment of depression and anxiety may reduce the need for analgesics. Conversely, relief of pain may significantly reduce depression and anxiety.

- A thorough medication history is critical to the development of an effective treatment plan.
    - Be sure to assess use of over-the-counter drugs and herbal preparations.
    - Look for drug-related fears or misconceptions, as they may lead to poor adherence to a therapeutic regimen.
- All drugs have risks and benefits. Physicians should:
    - Have a thorough knowledge of each drug's pharmacology
    - Know how to manage side effects
    - Regularly monitor drug efficacy and side effects
- Define the goals of drug therapy before prescribing. What constitutes a desirable outcome--less pain, better function, both? How much improvement is desired?
- Base the initial choice of analgesic on the severity and type of pain. Remember that patients may have more than one site or type of pain.
    - Severity--mild, moderate, severe
    - Type--nociceptive, inflammatory, neuropathic
- Give drugs an adequate therapeutic trial. When treating inflammatory or neuropathic pain, benefits may take weeks or longer to appear.
- Give adequate doses, and titrate to the dose that relieves pain without producing dose-limiting side effects.
- Two or more drugs with complementary mechanisms of action may provide greater pain relief with less toxicity and possibly lower doses of each drug (rational polypharmacy). Don't prescribe two drugs in the same class at the same time; instead, strive for complementarity. For example, chronic pain associated with arthritis may respond well to a combination of opioid and anti-inflammatory therapy.
- Be alert for possible interactions with other drugs the patient is taking for other indications (e.g., the additive sedative effects of drugs).
- Add non-drug therapies to maximize pain relief while decreasing side effects.
- Remember that while the development of addiction is unlikely during a course of pain treatment, it can occur. Physicians should assess for indicators of addiction during a course of opioid therapy.
- Consider disease-modifying treatments (e.g., bisphosphonates for patients with pain related to osteoporosis).

- Taper and discontinue drugs that don't meet your treatment goals. If a drug does not produce the desired therapeutic outcome, there is no need to continue it. This practice helps to prevent expensive and potentially dangerous polypharmacy.

Drugs Used in Pain Management

The major classes of drugs used in pain management are:

- Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)
- Acetaminophen
- Opioids
- Adjuvant Agents/Neuromodulators
- Others

NSAIDs

NSAIDs include non-selective cyclooxygenase (COX)-inhibitors such as aspirin, ibuprofen, naproxen, sulindac, diclofenac, piroxicam and COX-2 selective inhibitors such as celecoxib, rofecoxib, and valdecoxib.

Indications

- For mild to moderate nociceptive or inflammatory pain. Some NSAIDs are helpful in severe chronic inflammatory conditions. There is no evidence for their efficacy against neuropathic pain.

Dosing

- All have an analgesic ceiling (i.e., a maximum effective dose that is specific for each drug).

Side effects

- All drugs in this class have potentially significant end-organ toxicity.
    - Gastritis/peptic ulcer/esophagitis-duodenitis/gastrointestinal (GI) bleeding
        - The selective COX-2 inhibitors appear to have fewer gastrointestinal side effects.
    - Easy bleeding or bruising due to inhibition of platelet aggregation (especially with aspirin, which irreversibly inhibits platelet function)
        - The selective COX-2 inhibitors do not affect platelets and do not affect bleeding time.
    - Renal insufficiency or failure
    - The elderly are at special risk for NSAID toxicity and should be carefully monitored and started on the lowest recommended dose.
    - There has been concern that COX-2 selective inhibitors may increase the risk of cardiovascular events. Further studies are needed to determine the magnitude of the risk.

- Ibuprofen has been found to interfere with the cardioprotective effects of low dose aspirin; other non-selective NSAIDs have not been studied.
- Selective COX-2 inhibitors do not appear to interfere with the cardioprotective effects of low dose aspirin.
- Avoid aspirin in children and teenagers with influenza or chickenpox due to possible development of Reye's syndrome.

Acetaminophen

- Acetaminophen is hepatotoxic at higher doses; alcoholics are at special risk.
- Restrict intake to 4 grams (g)/24 hours (equivalent of eight 500-milligram [mg] tablets [tabs]).
- Use caution with combination analgesics (e.g., hydrocodone/acetaminophen or oxycodone/acetaminophen) as they contain variable amounts of acetaminophen. Monitor the total acetaminophen dose.
- Overdose is an emergency, and may require use of activated charcoal to prevent absorption and therapy with N-acetylcysteine.
- Long-term acetaminophen therapy may increase the risk of later renal disease. Monitor both hepatic and renal function.

Patients on chronic NSAID or acetaminophen therapy may require periodic reexamination and monitoring to avoid toxic side effects. Recommended tests include:

- NSAIDs - Abdominal exam, hemoglobin, blood urea nitrogen (BUN)/creatinine, stool occult blood
- Acetaminophen - transaminases/alkaline phosphatase, BUN/creatinine

Opioids

These derivatives of the opium poppy, papaver somniferum, are among the oldest and most effective analgesics known. After prolonged debate, many specialists agree that opioid analgesics, when carefully used in appropriate patients, have a place in chronic pain management.

Examples include morphine, hydromorphone, oxycodone, codeine, hydrocodone, methadone, propoxyphene, controlled-release morphine and oxycodone, fentanyl, and tramadol.

Indications

- Pain of any type and duration. Opioids are more effective in nociceptive/inflammatory pain, but also have efficacy in neuropathic pain.
- Opioids are available in many dosage forms and for administration by a variety of routes - oral, injectable, transdermal, rectal, inhalation, and oral transmucosal.

Certain opioids have significant limitations.

- Codeine: Side effects limit dose and thus efficacy. Codeine is a pro-drug; approximately 10% of Caucasians lack the enzyme needed to metabolize it to morphine and may not get pain relief from the drug.
- Meperidine: Meperidine is not recommended for use with chronic pain. It has a short duration of analgesic action (only 2 to 3 hours); long-lived metabolite, which is neurotoxic and can cause seizures, and may accumulate, especially when renal function is impaired.
- Propoxyphene: Propoxyphene is a relatively weak analgesic with limited efficacy; it may cause serious central nervous system side effects, especially in the elderly. It is a drug to avoid in the elderly.
- Mixed agonist-antagonists (e.g., pentazocine, butorphanol, nalbuphine): These have multiple limitations; may worsen pain by inducing a withdrawal syndrome in a person physically dependent on opioid agonists.

Some opioids have unique characteristics.

- Tramadol has weak opioid activity, and also potentiates serotonin and norepinephrine activity. It has an analgesic ceiling. Use of tramadol with selective serotonin reuptake inhibitors (SSRIs) may increase the risk of seizures and the "serotonin syndrome."
- Methadone, because of its significant lipid storage, is very long-acting when administered chronically; it must be titrated slowly, and is non-euphoric during chronic administration. It may have some indirect effects that reduce neuropathic pain. It is an excellent analgesic, but is often misunderstood by patients and physicians because of its use in addiction treatment.

Dosing

- Opioids have varying potencies and durations of action; knowledge of opioid pharmacokinetics is essential.
- Use long-acting agents for continuous pain and develop a plan for managing breakthrough pain ("rescue dosing") with short-acting agents.
- There is no dose ceiling for many opioids. Start with a low dose and assess response to the analgesic regimen; you may need to adjust the dose and/or change drugs to provide relief of pain while minimizing side effects.
- When increasing the dose of opioids, increase by a percentage of the current dose: 25 to 50% for mild pain, 50 to 100% for severe pain.
- Methadone is difficult to titrate because it has a short half-life during acute administration but a long and variable half-life with chronic administration. In office practice, methadone dose should not be increased more frequently than every 10 to 14 days, because the drug may take that long to reach a steady-state level in the body.
- Use equianalgesic dosing principles when changing from one opioid to another. An equianalgesic dosing table is provided in Appendix II of the original guideline document.

Side Effects

- There is no evidence for major end-organ toxicity during long-term therapy; for many opioids, there may not be a ceiling dose.
- Side effects are predictable and controllable. They include, but are not limited to, constipation, nausea and vomiting, sedation, and itching. Tolerance to

most side effects may develop in a week (excluding constipation). Approaches commonly used to manage opioid side effects are presented in the table below titled "Commonly Used Approaches in the Management of Opioid Side Effects."

- Every patient given an opioid on a chronic basis should be on a bowel management regimen. Choices include docusate (1 to 4 capsules[caps]/day); senna concentrate (2 tabs/day to start); bisacodyl suppositories (10 mg pr daily-every other day). High fluid intake may be helpful. Fiber supplementation helps some patients, but could worsen constipation in patients taking opioids.
- Side effects may be less with one opioid than with another.
- Serious side effects such as delirium or respiratory depression can occur if the dose is increased too quickly, especially in an opioid-naïve individual.
- There are no data to assess the risk of subtle neuropsychological impairment with long-term use.
- There are no conclusive data on the effects of opioid therapy on driving performance. Some studies describe decrements in performance; others find no decrement once a patient has adjusted to the regimen. Careful judgment should be used in each case.

Table: Commonly Used Approaches in the Management of Opioid Side Effects

Opioid Side Effect	Treatment	
	General Approach	Pharmacological Approach
Constipation	• Increased fluid intake and dietary fiber • Encourage mobility and ambulation if appropriate • Ensure comfort and convenience for defecation • Rule out or treat impaction if present	• Contact laxative plus stool softener (e.g., senna plus docusate) • Osmotic laxative (e.g., milk of magnesia) • Lavage agent (e.g., oral propylethylene glycol) • Prokinetic agent (metoclopramide) • Oral naxalone
Nausea	• Hydrate as appropriate • Progressive alimentation • Good mouth care • Correct contributory factors • Adjust medication	• If associated with vertiginous feelings, antihistamine (e.g., scopolamine, meclizine) • If associated with early satiety, prokinetic agent (e.g., metoclopramide) • In other cases, dopamine antagonist drugs (e.g., prochlorperazine, chlorpromazine, haloperidol, metoclopramide)
Somnolence or Cognitive Impairment	• Reassurance • Education • Treatment of	• If analgesia is satisfactory, reduce opioid dose by 25 to 50% • If analgesia is satisfactory and

Opioid Side Effect	Treatment	
	General Approach	Pharmacological Approach
	potential etiologies	the toxicity is somnolence, consider a trial of a psychostimulant (e.g., methylphenidate)

Source: American Medical Association. Pain Management; Part 4: Cancer Pain and End-of-Life Care. 2003. Reprinted with permission.

Tolerance, Physical Dependence, and Addiction

There is confusion about the meaning and significance of the following terms:

- Tolerance occurs when a higher dose of a drug is required to achieve the same effect. Tolerance to opioid analgesia does not occur in all individuals. If tolerance does occur, consider first increasing the dose. If this is unsuccessful or repeated dose increases are needed, consider switching to another opioid as there may be incomplete cross-tolerance among these drugs.
- Physical dependence means that the abrupt cessation of a drug or the administration of an antagonist will induce a physiologic "withdrawal syndrome." Chronic use of many medications, including steroids, some antihypertensives, and opioids, may result in physical dependence. Physical dependence is not synonymous with addiction, and is expected with chronic opioid therapy. When stopping opioids, taper the dose slowly to prevent withdrawal symptoms.
- Addiction is "a compulsive disorder in which an individual becomes preoccupied with obtaining and using a substance, the continued use of which results in a decreased quality of life." It has also been described as "a primary, chronic disease with genetic, psychosocial and environmental factors influencing its development and manifestations, characterized by impaired control over drug use, continued use despite harm, and craving." The risk of addiction is considered low in patients who have no history of substance abuse; patients with a prior history of alcohol or other drug addiction may still be candidates for treatment with opioids, but patients with previous substance abuse diagnoses or treatments warrant special care when treated with opioids.
- Monitor patients on chronic opioid therapy for behaviors suggestive of addiction. (see table below titled "Problems Suggestive of Addiction Associated with Chronic Opioid Therapy")
- Wisconsin Controlled Substances Laws and Regulations are presented in Appendix IV of the original guideline document.

Table: Problems Suggestive of Addiction Associated with Chronic Opioid Therapy

Adverse consequences of opioid use
• Decreased functionality • Observed intoxication

• Negative affective state
Impaired control over medication use, compulsive use • Failure to bring unused medications to appointments when asked to do so • Unsanctioned dose escalation • Requests for early prescription renewals • Reports of "lost" or "stolen" prescriptions • Appearance at clinic without appointment and in distress • Frequent visits to emergency departments to request drugs • Family reports of overuse or intoxication
Craving, preoccupation with opioids • Fails to comply with nondrug pain therapies • Fails to keep appointments • Shows interest only in relief of symptoms, not rehabilitation • Reports no effect of nonopioid interventions • Seeks prescriptions from multiple providers
*Note that any of these behaviors may occur from time to time in patients being treated for pain, particularly patients with inadequate pain treatment. A constellation of continuing behaviors should prompt further assessment for possible addiction.

Source: American Medical Association. Pain Management; Part 1: Overview of Physiology, Assessment, and Treatment. 2003. Reprinted with permission.

Antidepressants

The tricyclic antidepressants (TCAs) (e.g., amitriptyline, desipramine, doxepin, and nortriptyline are effective against neuropathic pain). (SSRIs such as fluoxetine, sertraline, paroxetine, citalopram, are helpful in treating the depression that frequently accompanies pain, but are not analgesic.) TCAs may also be useful for the treatment of insomnia.

Dosing

- Start low and go very slowly, over periods of weeks and months. Consider a starting dose of approximately 10 to 25 mg each night. Start even lower with elderly patients.
- Baseline electrocardiography (ECG) is indicated in patients at risk for cardiac conduction problems.
- Therapeutic range may be from 50 to 150 mg per day; again, it may be lower with elderly.
- Consider avoiding amitriptyline in the elderly (anticholinergic side effects).
- Analgesia may take weeks or longer to develop. Sedation may be useful to normalize disturbed sleep.

Side Effects

- Common side effects are sedation, dry mouth, constipation, urinary retention.

- TCAs may cause cardiac conduction defects, or arrhythmias.
- If discontinuation is planned, taper these drugs slowly.

Anticonvulsant or Antiepileptic Drugs (ACDs or AEDs)

These agents are very effective in the treatment of neuropathic pain. First generation drugs such as carbamazepine, phenytoin, and valproic acid and also newer, second generation drugs such as gabapentin, lamotrigine, topiramate, or zonisamide may be useful. Many of the newer agents are less toxic, require less therapeutic monitoring, and have a wider dosing range than the older drugs. Some are useful as "mood stabilizers" in bipolar disorder, agitated depression, and other conditions. Prescription for this purpose should be coordinated with a psychiatrist. Gabapentin is the only second generation anticonvulsant approved for the treatment of postherpetic neuralgia.

Dosing

- Dosing varies from drug to drug. Consider starting with a very low dose. Titrate up incrementally over weeks. Most drugs can be titrated weekly.
- Gabapentin can be titrated more rapidly, as often as every 24 to 48 hours. Titration should be stopped when benefit is achieved or side effects become a problem.

Side Effects

- Most side effects are related to the central nervous system, such as dizziness, sedation, cognitive difficulties.
- Some side effects are drug-specific (e.g., renal stones and paresthesias for topiramate; skin rashes for lamotrigine; myelosuppression for carbamazepine). Know the side effects thoroughly before prescribing.
- For older agents, blood levels should be checked periodically.
- When discontinuing these drugs, they should be tapered slowly to avoid withdrawal seizures or other side effects.

Topical Agents

Topical therapies for neuropathic pain may be helpful for continuous pain/dysesthesias caused by peripheral nerve injury.

- Capsaicin preparations have potential value. Capsaicin causes local burning, which may be severe; it should be applied several times daily for approximately 6 weeks for full effectiveness.
- Lidocaine patches may be useful for the treatment of postherpetic neuralgia and other cutaneous dysesthesias.
- Counter-irritant ointments or liniments, many containing menthol, may be helpful for musculoskeletal pain. Compounded ointments or gels containing NSAIDs, TCAs, or anticonvulsants can also be helpful.

Other Adjuvants

- Corticosteroids may be useful for treatment of severe inflammatory pain. They can be administered systemically or locally. Systemic administration may be limited by serious potential side effects. Consider using the lowest effective dose for the shortest possible time period to minimize adrenal cortical suppression.
- Baclofen may be used in the treatment of lancinating, paroxysmal neuropathic pain. It also may help to reduce painful spasticity.
    - Consider starting at 5 mg at night, titrate to a maximum of 20 mg 4 times daily; side effects may include nausea, dizziness, confusion, drowsiness, and hepatotoxicity.
- Tizanidine is another antispasticity agent with some usefulness in neuropathic pain. It may also be helpful in fibromyalgia, but evidence is anecdotal.
    - Consider starting at 2 mg at night; titrate to a maximum of 4 to 8 mg 3 times/daily. Side effects are similar to those of baclofen.
- "Muscle relaxants" are a heterogeneous class of drugs that may reduce muscle pain and often induce sedation. These drugs may be helpful for short-term use, as in pain flares or acute injury. Long-term use is not recommended. Carisoprodol is not recommended. One of its metabolites is meprobamate, a non-barbiturate sedative.
- Triptans (almotriptan, eletriptan, frovatriptan, rizatriptan, sumatriptan) are examples of drugs that can be specifically used in the treatment of migraine headaches.

Anxiolytics

- The SSRIs are the drugs of choice for the treatment of severe anxiety disorders. However, they have a relatively slow onset of action, so therapeutic effects may not be observed until 2 to 6 weeks after beginning treatment.
- Benzodiazepines are useful in situations that involve relatively acute anxiety reactions because their onset of action may be relatively quick (can be measured in minutes to hours). They can impair cognition and skilled motor function.
    - Physical dependence will develop with long-term use with benzodiazepines; therefore, taper slowly when stopping the drug to prevent symptoms of withdrawal. Addiction rarely develops in patients treated with benzodiazepines, except in patients with a past history of addiction. (Patients should be asked specifically about a past history of benzodiazepine or alcohol misuse or addiction.)
- Buspirone is a relatively novel agent that may be useful for mild to moderate anxiety--though its benefits may be greater after several weeks of therapy at an adequate serum level--in contrast to benzodiazepines, whose effects may be noted by patients in minutes to hours.

Drugs for Insomnia

Insomnia should be treated initially by correcting any remediable contributing factors. Sleep disorders, including sleep apnea, are common causes of insomnia; they should be ruled out or, if found, treated.

Other approaches to insomnia include:

- Discontinuing caffeine use.

- Observing good sleep hygiene (i.e., establish daily habits that promote sleep and minimize daily habits that interfere with sleep). Relief of pain frequently leads to improved sleep.
- Several over-the-counter drugs contain sedating antihistamines. Although these are widely used by the public, their efficacy has not been established.
- Sedative antidepressants such as trazodone (which is quite sedating but weakly antidepressant) may be useful.
- Benzodiazepines may be useful for short-term management of insomnia. Common agents include triazolam, temazepam, oxazepam, and selective benzodiazepine receptor agonists (zolpidem, zaleplon).
    - Benzodiazepines may worsen sleep apnea; long-term use may lead to rebound insomnia.
    - Benzodiazepines may cause physical dependence and should be tapered to prevent a withdrawal syndrome.
    - There is possible risk of respiratory depression and death if combined with alcohol or other sedatives.

Psychological Assessment and Therapies

The focus of psychological/psychiatric services with chronic pain patients is two-fold: differential diagnosis and direct treatment.

Diagnostic Responsibilities

This task includes the comprehensive assessment of patients prior to treatment. Determinations involving suitability for rehabilitative care, special precautions during the course of treatment and candidacy for surgical and interventional anesthesiology procedures may be considered specific referral questions. Proper selection of patients for therapy with short- and long-acting opioid analgesics is also a specific referral issue to be addressed. Patients with major psychiatric illness or active substance abuse problems may not be suitable candidates for pain treatment until these problems are adequately managed. Active drug abuse history and/or a criminal record associated with drug possession, sale, or abuse may also be contraindications.

Psychological Treatment

Psychological/psychiatric treatment services may include the management of a patient's mood and cognitive abnormalities that are of sufficient intensity to complicate recovery, but that do not preclude the patient's responsible participation in a medical rehabilitative care program. For example, a reactively depressed, chronic low back pain patient with significant sleep disorder might be appropriate for a combination of cognitive behavioral psychotherapy and psychotropic medication management.

Psychological treatment should be included with appropriate pharmacological, interventional, surgical and rehabilitation approaches.

Individual Cognitive Behavioral Psychotherapy

Individual cognitive behavioral psychotherapy is an insight-based counseling effort with emphasis on cognitive strategies for life planning, pacing of activities, and acceptance of physical limitations and their emotional consequences. Expectations for patient follow-through with behavioral strategies are a key component of this brief psychological intervention.

Hypnotic Analgesia

Hypnotic analgesia is a specific treatment technique involving the use of hypnosis procedures to reduce and/or eliminate organically-based pain sensations. Practitioners using these techniques require specific training.

Pharmacologic Treatment

See Pharmacotherapy

Vocational Counseling

Vocational counseling is a combination of psychometric and counseling techniques to facilitate reentry to the work place or appropriate avocation with reference to specific physical and emotional limitations secondary to chronic pain.

Group and Family Cognitive Behavioral Psychotherapy

Group and family cognitive behavioral psychotherapy includes techniques as defined in Table 5 in the original guideline, with the inclusion of selected family members and/or other pain patients.

Biofeedback Treatment

Biofeedback treatment involves the management of specific physiologic changes through the use of electromyographic and other biofeedback instruments. Both diagnostic and direct treatment effects may be expected with this modality (e.g., an index of paraspinal muscle spasm data to corroborate patient reports of pain distribution). A measurable relaxation response with a display of mastery by patients is an expected outcome of this treatment.

Interventional Approaches

Interventional pain management techniques should be used in conjunction with other pharmacological, psychological, surgical, and rehabilitation approaches to manage pain. They are generally not used in isolation. The practice of pain management carefully considers the individual, the precise diagnosis, the pathology, the likelihood of improvement, and maintenance of treatment.

- Repeated interventional procedures without substantial and sustained improvements in function are unwarranted.
- Interventional pain management is an important consideration in the diagnosis of the problem causing the pain and provides guidance for appropriate therapy.

Diagnostic Blocks

- Determine the pain generator (specific anatomic source of pain).
- Differentiate local from referred pain.
- Differentiate somatic from visceral pain.
- Determine the sympathetic nervous system contribution to pain.
- Determine whether a painful deformity (e.g., in a limb) is caused by neurally mediated muscle spasm or is a fixed, mechanical deformity. The former may respond to nerve block; the latter will not.
- Differentiate peripheral from central pain.
- Help guide specific therapy (e.g., neuroablative procedures, surgical decompression, spinal fusion, or intradiscal procedures).

Therapeutic Blocks

- By providing anesthesia, therapeutic blocks may facilitate the application of mobilization techniques, which are an important component of therapy.
- Local anesthetic combined with steroids may be useful in treating the inflammatory effects of specific pain syndromes, e.g., radicular pain, rotator cuff injury, tendonitis, bursitis.
- Many therapeutic blocks may also be useful diagnostically.
- Examples:
    - Myofascial trigger point injections may reduce pain and improve movement.
    - Selective epidural steroid injections may reduce radicular pain and dysesthesia.
    - Facet and/or medial branch blocks may ameliorate certain types of spinal pain.
    - Sympathetic nerve blocks may reduce sympathetically-mediated pain.

Neuroaugmentative Procedures (Implanted Nerve Stimulators)

- These modalities may be most effective in the treatment of peripheral neuropathic pain syndromes.
- Candidates for neuroaugmentative implants should undergo a detailed directed physical examination as well as a psychological evaluation to determine suitability and potential success for the procedure.
- Peripheral stimulation may be used to treat pain affecting peripheral nerve structures (e.g., upper or lower limb mononeuropathies, facial neuralgic conditions).
- Spinal cord stimulation may be used to treat neuropathic pain originating at cervical, thoracic, and/or lumbosacral spinal nerve roots or cord.

Intraspinal Drug Delivery Systems (Implanted Pumps and/or Catheters)

- May be useful in treatment of nociceptive pain
- May be particularly useful in some selected patients with chronic back pain
- May provide analgesia with lower side effects, because a lower dose of medication may be required
- Other drugs besides analgesics may be used (e.g., baclofen to control spasticity)

Neuroablative Procedures

- Nerve tissue may be destroyed to eliminate the pain generator or to interrupt nociceptive transmission. Examples:
    - Radiofrequency medial branch neurotomy may be used for facet-based spinal pain
    - Chemical or radiofrequency neurolysis of peripheral nerves or nerve terminals
- It is recommended that neuroablative procedures be used cautiously, as they can lead to the development of intractable neuropathic pain.

Rehabilitation Approaches

Pain rehabilitation is a useful and cost-effective approach to chronic pain management. It is used in conjunction with pharmacological, psychological, surgical, and interventional approaches. Rehabilitation employs a behaviorally-based, team-driven program to restore lost physical, psychological, and social function for the patient with chronic pain. The pain rehabilitation model makes patients responsible partners in their own progress, enlists the support and assistance of other providers, and places all aspects of treatment into a clear and goal-oriented context.

Principles of Rehabilitation

- Rehabilitation is an important component of pain management. Chronic pain rehabilitation should employ a skilled treatment team to:
    - Restore function
    - Alleviate pain wherever possible
    - Improve pain management skills for the patient with persistent pain
- Chronic pain rehabilitation may be considered an active treatment, as opposed to maintenance.
    - Active: the patient and team work directly to improve function and reduce pain within a set time frame. Treatment is designed to "cure" or "alleviate" the underlying condition, while improving function.
    - Maintenance: focuses on self-management (e.g., exercise, cognitive-behavioral) and ongoing symptomatic medical intervention. (This is not intended to describe "maintenance treatment" as used in narcotic treatment programs.)
- Patient must be motivated to, and capable of, participating.
- Conditions requiring urgent surgical or medical intervention (e.g., neurological emergency, infection) must be ruled out.

Implementation

- Comprehensive assessment: A thorough history and examination lead to clear diagnoses and a structured treatment plan.
- Treatment: Multiple concurrent interventions designed to address all issues.
    - Physical and occupational therapy
    - Exercise--most common treatment method, likely most effective. Different specific exercise programs are appropriate for patients with different pain conditions. They include:
        - Postural training and stabilization

        - Stretching
        - Strengthening
        - Home exercise program--this is vital
    - Work conditioning/work hardening
    - Ergonomic modifications
    - Modalities, used in conjunction with active exercise (thermal, massage, electrical stimulation, traction, Transcutaneous Electrical Nerve Stimulator, myofascial release)--transient relief only; use sparingly
    - Behavioral/psychological therapy (See Psychological Therapies)
- Medications
    - Effective pharmacotherapy may make patients more able to participate in rehabilitation. (See Pharmacotherapy)
- Injection procedures
    - Trigger point injections may relieve pain and facilitate rehabilitation.
    - See Interventional Approaches
- Vocational rehabilitation
    - May help patients identify vocational interests and aptitudes through testing
    - May recommend job modifications
    - May help identify new jobs

Monitor and Outcomes Assessment

The patient's progress toward treatment goals should be periodically reassessed. Goals and time frames are adjusted accordingly. Common structure for patient monitoring is the team conference, where the treatment team meets (with or without the patient present) to compare notes, report on progress, and modify the treatment plan as needed. When planned endpoints are met, the patient should be discharged. Suggested outcome measures:

- Objective physical measures--range of motion, strength, speed, balance
- Patients' ratings of pain, function, and emotional status
- Standardized instruments assessing quality of life, function, affect, pain impact
- Documentation of improved functional and (where appropriate) vocational performance

Points to measure at discharge:

- Document patient's ability to self-manage condition; make sure contingency plans for pain flares are in place.
- Referring clinician's understanding of the treatment plan and ability to continue assisting the patient as needed

Consider scheduling a set number of increasingly spaced follow-up visits for monitoring maintenance of gains and/or development of new problems.

Surgical Approaches

Surgical Indications

- In spinal disorders, sudden or progressive motor loss or neurological deficit is an absolute indication for referral to a spine surgeon.
- Patients with persistent radicular pain after appropriate rehabilitation programs and interventional approaches may be candidates for surgical treatment.
- Consideration should be given to the severity of pain and effects on function.

Documentation

- Document carefully the rationale for surgery in individuals with chronic pain.
- Provide a thorough diagnosis of the pain problem and its effect on the individual's function and quality of life.
- Document the results of pertinent diagnostic studies.
- Document previous unsuccessful non-operative treatments and operative treatment.

Realistic Outcome Expectations

- Communicate outcome expectations carefully to the patient before surgery and document the discussion.
- Emphasize the need for active participation by the patient and continuing self-management after surgery.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of evidence supporting the recommendations is not specifically stated.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate management of chronic pain

POTENTIAL HARMS

- Side effects associated with pharmacotherapy (please refer to "Major Recommendations" field)
- Opioid analgesics, in particular, may raise concerns about regulatory oversight or undue fears that patients will develop addiction. Such hesitancy can unnecessarily deprive some patients of medically necessary interventions that would improve their function and quality of life.
- The risk of addiction is considered low in patients who have no history of substance abuse; patients with a prior history of alcohol or other drug addiction may still be candidates for treatment with opioids, but patients with

previous substance abuse diagnoses or treatments warrant special care when treated with opioids.
- Addiction rarely develops in patients treated with benzodiazepines, except in patients with a past history of addiction.
- There is possible risk of respiratory depression and death if benzodiazepines are combined with alcohol or other sedatives.

CONTRAINDICATIONS

CONTRAINDICATIONS

- Patients with major psychiatric illness or active substance abuse problems may not be suitable candidates for pain treatment until these problems are adequately managed. Active drug abuse history and/or a criminal record associated with drug possession, sale, or abuse may also be contraindications.
- Meperidine (Demerol) is contraindicated in patients receiving monoamine oxidase (MAO) inhibitors.
- Avoid aspirin in children and teenagers with influenza or chickenpox due to possible development of Reye's syndrome.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

The strategies outlined herein are not intended to be all-inclusive, but to suggest approaches that should be useful to physicians and non-physician clinicians to enable them to manage patients with chronic pain more effectively.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

IMPLEMENTATION TOOLS

Chart Documentation/Checklists/Forms

For information about availability, see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Living with Illness

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Guidelines for the assessment and management of chronic pain. WMJ 2004;103(3):13-42. [28 references] PubMed

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Not applicable: The guideline was not adapted from another source.

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the Wisconsin Medical Society Web site.

Print copies: Available from the Wisconsin Medical Society, 330 E. Lakeside Street, PO Box 1109, Madison, WI 53701-1109, Phone: (866) 442-3800

AVAILABILITY OF COMPANION DOCUMENTS

The following are available:

- Confidential health questionnaire. Appendix I. Guidelines for the assessment and management of chronic pain. WMJ 2004;103(3):32-38.
- Guideline for treatment with controlled substance medications. Appendix II. Guidelines for the assessment and management of chronic pain. WMJ 2004;103(3):40-41.

Electronic copies: Available in Portable Document Format (PDF) from the Wisconsin Medical Society Web site.

Print copies: Available from the Wisconsin Medical Society, 330 E. Lakeside Street, PO Box 1109, Madison, WI 53701-1109, Phone: (866) 442-3800

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI on August 25, 2005. This summary was updated by ECRI on May 31, 2006 following the U.S. Food and Drug Administration advisory on Paxil (paroxetine hydrochloride). This summary was updated by ECRI on August 29, 2006, following the U.S. Food and Drug Administration advisory on Triptans, SSRIs, and SNRIs.

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